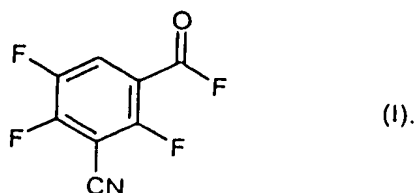
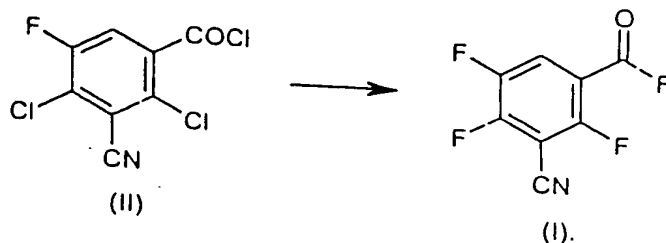


Patent claims

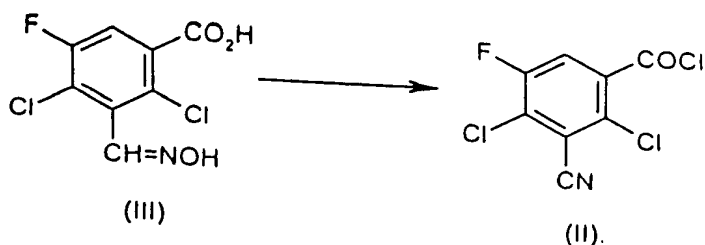
1. 3-Cyano-2,4,5-trifluoro-benzoyl fluoride of the formula (I)



2. Process for the preparation of 3-cyano-2,4,5-trifluoro-benzoyl fluoride of the formula (I) according to Claim 1, characterized in that 3-cyano-2,4-dichloro-5-fluoro-benzoyl chloride is reacted nucleophilically with a fluoridizing agent according to the following equation:



3. Use of 3-cyano-2,4,5-trifluoro-benzoyl fluoride for the preparation of 3-cyano-2,4,5-trifluoro-benzoyl chloride by reaction of 3-cyano-2,4,5-trifluoro-benzoyl fluoride with chlorinating agents, optionally in the presence of diluents.
4. Process for the preparation of 2,4-dichloro-3-cyano-5-fluoro-benzoyl chloride of the formula (II) by elimination of water from 2,4-dichloro-5-fluoro-3-N-hydroxyiminomethyl-benzoic acid (III) with simultaneous conversion of the carboxylic acid function into the carbonyl chloride according to the following equation:



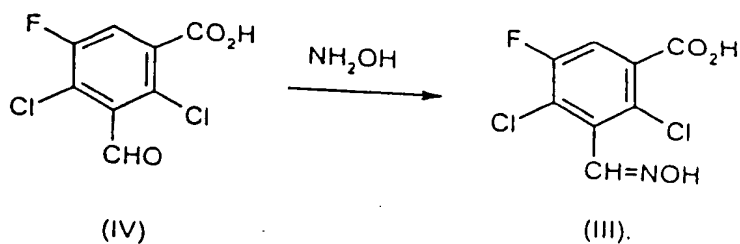
5. 2,4-Dichloro-5-fluoro-3-N-hydroxyimino-methyl-benzoic acid of the formula (III)

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6. Process for the preparation of 2,4-dichloro-5-fluoro-3-N-hydroxyiminomethyl-benzoic acid of the formula (III) according to Claim 5, by reaction of 2,4-dichloro-5-fluoro-3-formyl-benzoic acid of the formula (IV) with hydroxylamine according to the following equation:

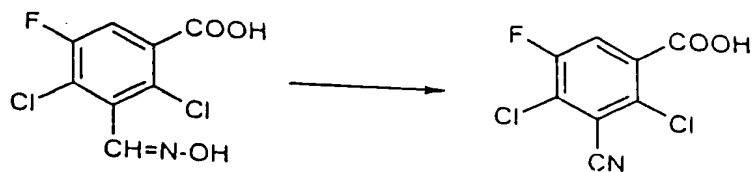
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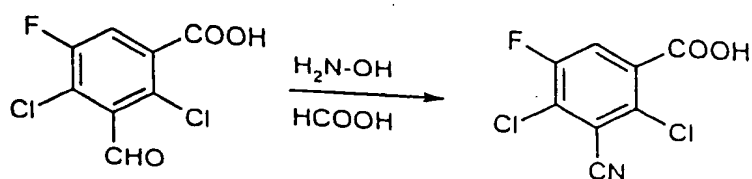
7. Process for the preparation of 2,4-dichloro-3-cyano-5-fluoro-benzoic acid

- a) by elimination of water from 2,4-dichloro-5-fluoro-3-N-hydroxyiminomethyl-benzoic acid of the formula (III) according to the following equation

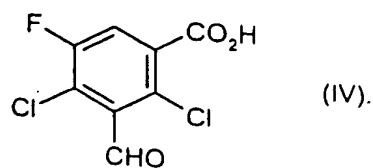
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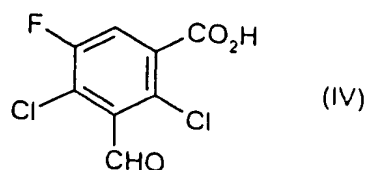
- b) by reaction of 2,4-dichloro-5-fluoro-3-formyl-benzoic acid of the formula (IV) with hydroxylamine in the presence of formic acid according to the following equation



8. 2,4-Dichloro-5-fluoro-3-formyl-benzoic acid of the formula (IV)



9. Process for the preparation of 2,4-dichloro-5-fluoro-3-formyl-benzoic acid of the formula (IV) according to Claim 7,

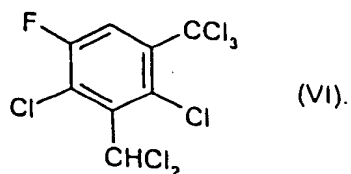


- a) by hydrolysis of 2,4-dichloro-5-fluoro-3-dichloromethyl-benzoic acid or

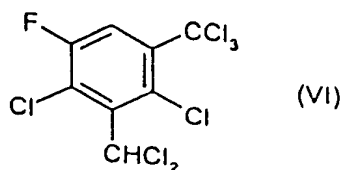
b) by hydrolysis of 2,4-dichloro-5-fluoro-3-dichloromethyl-1-trichloromethylbenzene of the formula (VI),

in each case in the presence of acids and optionally in protic solvents.

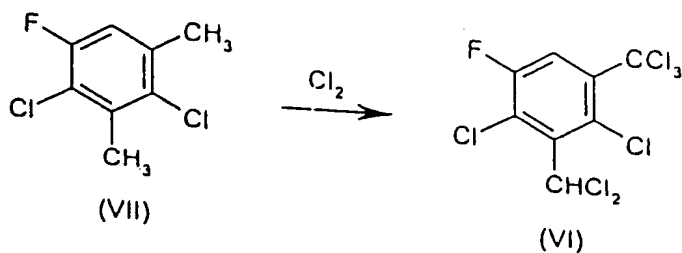
10. 2,4-dichloro-5-fluoro-3-dichloromethyl-1-trichloromethylbenzene of the formula (VI)



11. Process for the preparation of 2,4-dichloro-5-fluoro-3-dichloromethyl-1-trichloromethylbenzene of the formula (VI),

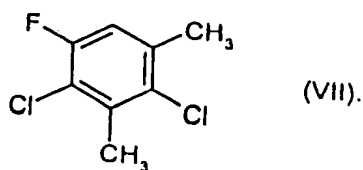


according to Claim 10 by side-chain chlorination of 2,4-dichloro-5-fluoro-1,3-dimethylbenzene (VII) to give 2,4-dichloro-5-fluoro-3-dichloromethyl-1-trichloromethylbenzene (VI) according to the following equation:



characterized in that the chlorination is carried out under free-radical conditions and/or at elevated temperature.

12. 2,4-dichloro-5-fluoro-1,3-dimethylbenzene of the formula (VII)



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13. Process for the preparation of 2,4-dichloro-5-fluoro-1,3-dimethylbenzene of the formula (VII) according to Claim 12 by ring chlorination of 5-fluoro-1,3-xylene (VIII) to give 2,4-dichloro-5-fluoro-1,3-dimethylbenzene (VII) using chlorine gas, optionally in a diluent and in the presence of a catalyst according to the following equation:

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